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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/713,423	11/15/2000	Sanjīve Agarwala	TI-29694	3105

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EXAMINER	
DUONG, FRANK	

ART UNIT	PAPER NUMBER
2666	3

DATE MAILED: 07/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/713,423	Applicant(s) AGARWALA ET AL.	
	Examiner Frank Duong	Art Unit 2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 November 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is a response to the Preliminary Amendment dated 11/15/00. Claims 1-14 are pending in the application.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "said predetermined constant" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Hahne et al (USP 5,014,265) (hereinafter "Hahne").

Regarding **claim 1**, in accordance with Hahne reference entirety, Hahne discloses a method for tracking allocated space in a write reservation station of a data

transfer controller (*col. 6, lines 45-54*) using a write allocation count (*Fig. 3; 304*), said method comprising the steps of:

initiating said write allocation count (LIMIT[VC]) prior to performance of any data transfers (*col. 7, lines 37-47*);

increment said write allocation count on allocation of a block of write reservation station space at a data destination (*col. 7, line 68 and col. 8, line 6*);

decrementing said write allocation count (FIG. 3; COUNT TABLE 304; COUNT[VC] and LIMIT[VC]) on a read from a data source (*col. 8, line 25*);

if said write allocation count meets predetermined criteria (LIMITREACHED (FALSE)), then reading from said data source (Fig. 1; 102), transferring said read data to a data destination via a data routing channel (*Fig. 3; bus VC or col. 6, line 66*) and storing said transferred data in allocated reservation station space (*Fig. 2; 210*) (*col. 7, lines 60-62*); and

if said write allocation count does not meet said predetermined criteria (LIMITREACHED (TRUE)), then performing no further allocations of space to said write reservations station until said write allocation count meets said predetermined criteria (*col. 6, lines 7-15*).

Regarding **claim 2**, in addition to features recited in base claim 1 (see rationales discussed above), Hahne further discloses wherein: a predetermined constant (1) of said step of initializing said write allocation count equals a number of data words storable in said data routing channel (*col. 7, lines 40-41*).

Regarding **claim 3**, in addition to features recited in base claim 1 (see rationales discussed above), Hahne further discloses wherein: said step of incrementing said write allocation count on allocation of a block of write reservation station space increments said write allocation counter by an amount equal to a number of data words allocated (*col. 7, line 65 to col. 8, line 6*).

Regarding **claim 4**, in addition to features recited in base claim 1 (see rationales discussed above), Hahne further discloses wherein: said step of decrementing said write allocation count on a read from a data source decrements said write allocation counter by an amount equal to a number of data words read (*col. 8, lines 16-36*).

Regarding **claim 5**, in addition to features recited in base claim 1 (see rationales discussed above), Hahne further discloses wherein: said step of reading from said data source reads data in an amount equal to a read burst size constant related to a default read burst size (cell) of said data source (*col. 8, line 30*).

Regarding **claim 6**, in addition to features recited in base claim 5 (see rationales discussed above), Hahne further implicitly and inherently discloses wherein: said predetermined criteria of said write allocation count includes whether said write allocation count is greater than or equal to said read burst size constant (*col. 8, lines 6-15*).

Regarding **claim 7**, in addition to features recited in base claim 5 (see rationales discussed above), Hahne further implicitly and inherently discloses wherein: said predetermined criteria of said write allocation count includes whether said write

allocation count is greater than or equal to a number of data words storable in said data routing channel (*col. 8, lines 6-15*).

Regarding **claim 8**, in addition to features recited in base claim 5 (see rationales discussed above), Hahne further implicitly and inherently discloses wherein: said predetermined criteria of said write allocation count is met if said write allocation count is greater than or equal to said burst size constant, and an allocation of block of write reservation station space was made in a immediately prior cycle (col. 8, lines 6-15).

Regarding **claim 9**, in addition to features recited in base claim 5 (see rationales discussed above), Hahne further implicitly and inherently discloses wherein: said predetermined criteria of said write allocation count is met if said write allocation count is greater than or equal to said burst size constant, and an allocation of block of write reservation station space was not made in a immediately prior cycle (*col. 8, lines 6-15*), and said write allocation count is greater than or equal to a number of data words storable in said data routing channel (Fig. 3; GLOBAL COUNT 310) (*col. 7, line 66 to col. 8, line 15 and thereinafter*).

Regarding **claim 10**, in addition to features recited in base claim 5 (see rationales discussed above), Hahne further implicitly and inherently discloses wherein: said predetermined criteria of said write allocation count is met if said write allocation count is not greater than or equal to said burst size constant, and all write reservation station space at said data destination has been allocated (*col. 8, lines 6-15 and thereinafter*).

Regarding **claim 11**, in addition to features recited in base claim 5 (see rationales discussed above), Hahne further implicitly and inherently discloses wherein: said predetermined criteria of said write allocation count is not met if said write allocation count is not greater than or equal to said burst size constant, and all write reservation station space at said data destination has been allocated (*col. 8, lines 6-15 and thereinafter*).

Regarding **claim 12**, in addition to features recited in base claim 5 (see rationales discussed above), Hahne further implicitly and inherently discloses wherein: said predetermined criteria of said write allocation count is not met if said write allocation count is not greater than or equal to said burst size constant, and an allocation of block of write reservation station space was not made in a immediately prior cycle (*col. 8, lines 6-15*), and said write allocation count is greater than or equal to a number of data words storable in said data routing channel (Fig. 3; GLOBAL COUNT 310) (*col. 7, line 66 to col. 8, line 15 and thereinafter*), and all write reservation station space at said data destination has been allocated (*col. 8, lines 6-15 and thereinafter*).

Regarding **claims 12-13**, in addition to features recited in base claim 1 (see rationales discussed above), Hahne, at col. 8, lines 16-36 and thereinafter, further goes into details of how the transmitter 204 reads cell from cell queue 210 using controller 212. The recitation thereat implicitly and inherent anticipates the claimed limitations in a manner as recited.

Conclusion

4. The prior/related art made of record and not relied upon is considered pertinent to applicant's disclosure.

Comisky et al (USP 6,574,683).

Rege et al (USP 5,390,299).

Texas Instruments, SPRU190C, TMS320C6000 Peripherals Reference Guide, Chapter 6, pages 1-41, April 1999.

Comisky et al, A Scalable High-Performance DMA Architecture for DSP Applications, IEEE, pages 414-419, September 2000.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is (703) 308-5428. The examiner can normally be reached on 7:00AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (703) 308-5463. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frank Duong
Examiner
Art Unit 2666

June 13, 2004